

for the post-mortem examination of all parts and organs of the body. This section will be especially valuable, both to the student and practitioner; as it contains detailed as well as general information, given just in the order and manner in which they are wanted for use.

An Appendix is added, with brief directions for writing prescriptions, and a tabular view of the principal signs, abbreviations and Latin words employed in pharmaceutical language. A Glossary follows, chiefly of Latin and Greek words used in medicine; and the volume concludes with a few blank Forms for reporting cases, according to the system inculcated in the text.

The writer's experience has evidently made him acquainted with the wants of the clinical student, and has enabled him to prepare a book for which we anticipate a popularity in proportion to its merit. H. H.

ART. XXIII. *Compendium of Human Histology.* By C. MOREL, Prof. agrégé à la Faculté de Médecine de Strasbourg. Illustrated by 28 plates. Translated and edited by W. H. VAN BUREN, M. D. New York: Baillière Brothers, 1861. 8vo. pp. 207.

THIS work, which is intended to serve as an introduction to the study of human histology for the medical student, is especially to be commended, as attempting to embody the more recent observations of German and other investigators. Thus, for example, in the section on cells, we see with pleasure Schwann's erroneous doctrine of free cell-development thrown aside, and we are correctly told that "every cell must derive its origin from another previously existing cell. In the present state of science, but two modes are known in which cell-generation is accomplished in human histology: *endogenous* generation, and multiplication by *cleavage*." (p. 14.)

So also we are presented with the more modern doctrine of the structure of connective tissue (called connecting tissue in the translation), in the account of the development of which certain of the errors of the earlier microscopists are, however, retained.

"The essential elements of connecting tissue are fibres and cells. Its fibres are of two kinds, viz: connective fibres properly so called, and elastic fibres. Its cells are diminutive in size, generally branched, but sometimes fusiform, and have received from Virchow the name of plasmatic cells." (p. 17.)

And again: "The cellular element of connecting tissue (the plasmatic cell) is a recent discovery; we are indebted to Virchow for the first thorough exposition of its nature, and especially of its important pathological relations. Plasmatic cells are minute corpuscles, sometimes fusiform, but more frequently star-shaped, with sharp outlines, and connected with each other by means of their branching prolongations, so as to constitute a network similar to that formed by the cells of bone." (p. 19.)

"Finally, the researches of Virchow tend to prove that all, or nearly all, of the morbid formations developed in the meshes of the connecting tissue throughout the body, are traceable to the perverted growth of plasmatic cells." (p. 21.)

The above quotations sufficiently show the views of M. Morel with regard to the minute structure of connective tissue, as well as the source from whence they are derived. We are decidedly of the opinion that it would have been better had he drawn from the same authoritative source his account of its development. According to Virchow, while some of the embryonic cells are assuming the stellate character of connective tissue corpuscles (plasmatic cells), and others becoming elastic fibres, &c., the homogeneous intercellular substance in which the elements are imbedded becomes fibrillated in appearance, and thus produces the connective tissue bundles. According to M. Morel, however, the connective tissue bundles are developed out of cells after the fashion first described by Schwann.

"The fibres of connecting tissue develop themselves from cells of the simplest

form, which commence the process by assuming an elongated shape, then join each other, end to end, and gradually break up into fibres within, so that each row of cells thus attached by their extremities is developed into a bundle of connective fibres." (p. 23.)

Besides this method, M. Morel thinks he has observed in pathological cases the transformation of a similar series of cells into a single fibre, and also the transformation into a single fibre of an elongated series of free nuclei; as to the first of these possibilities, we feel convinced that the observation on which it is based was concerned with the development of yellow elastic fibres, with which the drawing of the specimen well accords (Plate IV, fig. 4); as to the second, we are not able to gain a satisfactory idea of the basis of fact upon which it reposes, or to interpret the drawing of the case (Plate IV, fig. 5).

The erroneous views entertained by M. Morel of the genesis of the connective tissue bundles, necessitates a similar error in connection with fibro-cartilage. "In the formation of fibro-cartilage a portion only of the original formative cells take on the changes above described, whilst the remainder transform themselves into connective and elastic fibres." (p. 29.) This is a view of the development of fibro-cartilage which has no foundation in fact, and which is at once overturned by the practical study of the development of this tissue; the matrix of the fibro-cartilages being homogeneous at first, and subsequently fibrillating, so that these fibres, like those of the white fibrous bundles, represent, in fact, not cells, but transformed intercellular substance.

It is not in our power, nor do we feel inclined at present to follow M. Morel from subject to subject in detail. Did we deem it advisable to do so, we should in many other points be obliged to criticize him for not presenting to the student the best information attainable at the present moment. Indeed, any error in the selection of his views on disputed points becomes especially important, where, as in the present work, the compendious character of the treatise compels the author to admit no other account than that which he determines upon as his own.

Perhaps, however, the most serious fault of the book is its extreme brevity. An account of the minute anatomy of the organ of smell, begun and finished in about half a page, of the mammary gland in six lines, of the Meibomian glands in three, &c. &c., is not complete enough to give anything but the loosest general notions of the matter to a novice, and can be of no possible use to the more advanced student.

In concluding, it is only just to bestow the praise which is deserved upon the American translator, who has moreover added a number of valuable notes, and to commend the general character of the lithographic plates, twenty-eight in number, with which the book is illustrated.

J. J. W.

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ART. XXIV.—*Recherches sur la Substitution Graisseuse du Rein.* Par M. le Docteur ERNEST GODARD, Ancien Interne des Hôpitaux de Paris, Membre de la Société de Biologie, etc. Paris, Victor Masson, 1859. 8vo. pp. 31.

M. GODARD occupies the first few pages of his monograph with citations from several authors, to the effect that fat may be deposited in the tissue of various organs, a fact which we believe is not disputed. He next impresses upon the reader the view that fatty infiltration or deposition, is quite a different thing from fatty degeneration, or transformation—a task which he might well have spared himself, as we are not aware that any opposition exists among pathologists to this very obvious and reasonable doctrine.

In the next place, M. Godard asserts that the kidney is, after the muscles, the organ most liable to undergo fatty degeneration, or substitution. We think this opinion admits of being questioned; nevertheless, no doubt can exist that fat is frequently substituted for the normal tissue of the kidney. Several cases are cited by M. Godard from the writings of Morgagni, Rayer, Cruveilhier, Petrequin, and others, and he concludes that